Louisiana
Department of Transportation
And Development

Lafayette
Metropolitan Planning Organization

Lafayette Consolidated Government
Traffic & Transportation Department
Metropolitan Planning Organization
Comprehensive Planning Divison

2030
Transportation Plan

DEMOGRAPHIC METHOD, PROJECTIONS, AND SURVEY

Prepared by
Dr. David C. Johnson
Neel-Schaffer, Inc.
626 S.Buchanan Street.
Lafayette, Louisiana 70501

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0.0 Executive Summary

This summary is written for you, the public, in mind. We, the MPO Staff, are writing to you so that you can understand how and why we went about counting people and workers in the Lafayette area.

This is a very technical topic, but we hope to convey to you the essential points in this introduction. If you want to pursue the technical details, there is probably more than enough to satisfy your curiosity.

This report describes your future and the future of your children because where people live and work effects their lives in many ways. If we understand where people live and work, we can make good decisions not only about where to build roadways, but also other things that are important, like schools, libraries, hospitals, and businesses.

You can understand, we hope, that transportation is not just about roadways, but also about the people who use the roadways. In doing this work, we are seeking to maximize the tax dollars so that we can build only those roads that people will actually need built.

So here goes: just the essential points.

0.11 How many roads do we need to build?

To answer that question, you need to know where people will live and work in the Lafayette Metropolitan Area.

Once you know where people live and work, you can say how many roads they need.

It's that simple.

0.12 How many people will live and work in the metro area?

218,895 people were counted individually during the 2000 census by the federal government. By year 2030, we estimate that 270,203 people will live in the same area.

By 2030, the metro area will be much bigger. It would not surprise us that there will be 500,000 people living and working in this expanded area. How big an area will be determined in 2010 and 2020 when the decennial census is performed.

We only estimated what will happen in the metro area as it is now in 2000: all of Lafayette Parish and rural parts of Acadia, Iberia St. Martin, and Vermilion Parishes. This area includes the following incorporated municipalities: Breaux Bridge, Broussard, Carencro, Duson, Lafayette, Maurice, Scott, and Youngsville. The City of Lafayette is consolidated with the parish government being known as the Lafayette Consolidated Government.

0.13 Where will people live?

We have divided the metro area into 599 Traffic Analysis Zones (TAZ's). These are essentially neighborhoods being bounded by major arterials, railroads, and streams (bayous, rivers, coulees, canals, and ditches).

We have estimated the number of people living, working and going to school in each of these TAZ's.

0.14 How did we count and then estimate where people live?

We used the official US Census Bureau estimates for 2000 and then projected them for 2010, 2020, and 2030. Since the Census bureau did the count, nearly every one of these persons were identified and counted separately.

To project where people will live, we used the official estimates used by the state of Louisiana to estimate expenditures in the coming years. We looked at these numbers and modified them just a bit based on recent trends that were occurring. Here are the estimates we used:

Year 2010 = 245,619 people
Year 2020 = 270,203 people
Year 2030 = 292,596 people

We looked at how many women were of child bearing age and how many elderly people lived in each zone. Based on these numbers, we estimated how many people would be born and how many people would die. These are the same figures used by life insurance companies to estimate longevity.

We also looked at how many move in and move away from Lafayette using their age and gender as guidelines.

Using birth, deaths, in-migration and out-migration, we classified each of 599 TAZ's as kinds of neighborhoods that have different growth rates.

We also looked where there was undeveloped land and large transportation projects that would enable people to build large subdivision and commute to Lafayette. We located these tracts using aerial photographs taken in 1998 and 2001.

If you want to see on a map where this population growth will take place, you can look at Maps 9-1 and 9-2. The first map (9-1) has only birth and deaths. The second map (9-2) has birth, deaths and migration show. Flip back and forth between the maps and you will see zones generally changing from yellow to blue. When it changes from yellow to blue, that shows where people will move and that were we expect the most population growth.

0.15 How did we project where people will work?

We looked at employment records from the Louisiana Department of Labor for 2000 and 2002 for each and every business in Lafayette Parish, some 100,000 businesses in all. We used the employers' address and tried to put a dot on a computer map for each business. We actually located 75% of all workers this way. When we could not locate a business, we estimated where the other 25% of the workers would be employed using the kind of business it was in (standard industrial code). We did a random sample of the records to see how well we had placed all of the workers in the parish. We determined that 96.2% (plus or minus 2.67%) of the workers were assigned to the correct zone.

We looked at the kind of business each employer was doing. We then looked at the probable growth rates of each of these kinds of business. We also looked at how far away people travel to do business and shop in the Lafayette area. We developed a factor for each employment sector and then multiplied it find how big the business sector might be in the coming years.

We did sums within each of the 699 TAZ and used that number to estimate how many people work in retail and all other sectors combined.

0.16 How did we use these figures on where people live and work?

We used these figures in formulas developed for Lafayette. The formulas estimate two things:

- Attractions: how many trips are produced in each zone
- Productions: how many trips end in each zone.

Imagine a giant ledger in which every zone has the number of trips going and coming to each other zone. We measured the distance and the road capacity to create a computer map of every major roadway in the metro area. The computer map was used by a computer program called TransCAD. The program made the assumption that traffic will flow like water. The trips, like water, will flow using the shortest distance and the lease resistance between any two points.

0.17 How long did all this take?

It was a big project that consumed some of the time of the staff of Metropolitan Planning Organization for five years. We also hired on a part time basis three consultants who were experts in this area for 2 years. The work you are now reading took thousands of hours of work.

We knew that this work was important because transportation effects most people lives. We also know that this work will be of use to a lot of other people. Other government

professionals, like the fire, police and electrical departments, need to know where they need to build for the future development of the parish. We also need to build public institutions like schools and libraries. Business people also might need to know where people will live and work so that they can make investments that will create jobs.

0.18 How much did this cost?

This project was very expensive. The federal government gave us a grant totaling about $400,000. Before the Federal Highway Administration spends money on local projects, it wants to be assured that the money is being spent wisely and where it's needed.

0.19 Who were the people who worked on this demographic project?

This work is a collaboration between Dr. David Johnston and the planning staff of Metropolitan Planning Organization.

Dr. David Johnston recently retired from the University of Louisiana. He taught for more than 20 years and schooled a whole generation of planners and geographers in southwest Louisiana.

When he retired, he authored parts of this volume and shared the results not in an academic forum, but with the people of Lafayette so that it might be put to use. His work is found in Chapters 1, 2, and 3. His primary responsibility lies in interpreting the 2000 census data as well as the 2000 school attendance and employment survey. All of the projections and the method by which he made are also his original work.

The MPO staff authored this executive summary you are now reading as well as chapter 4 dealing with the employment survey. The MPO staff also compiled the base 2000 census data as well as collected the 2000 school attendance and employment survey.

This multivolume work and two remaining volumes were produced by the MPO staff using the information produced by Dr. Johnston. These two volumes contain 44 maps and five statistical tables of nearly 100 demographic variables.

The names of the MPO staff people who worked on the project are:

- Tony Tramel: Department Head
- Mike Hollier: Planning Manager
- Mike LeBlanc: Project Coordinator, Mapper, Employment Surveyor, and Editor
- Vijay Kunada: Mapper and Traffic Modeler
- Brenda Deshotel: Employment surveyor
- Claire Connolly: Employment surveyor
- Scott LaFleur: Mapper and Employment Surveyor

The names of the consultants working on the project were:

- Dr. David Johnson, Demographer
- L.P. Ledet, Project Coordinator
- Raju Porandla, Traffic Modeling

0.20 Chapters and Appendices

This work is composed of four main chapters and three appendices.

Chapter 1: Demographic Projections,
Chapter 2: Population and Dwelling Units Methodology;
Chapter 3: Employment and School Attendance; and
Chapter 4: Employment Survey.

Chapter 1 describes the projected population and dwelling units by parish and region.

Chapter 2 deals with the methods of projecting population and dwelling units.

While Chapter 3 and 4 both deal with employment, Chapter 3 describes how the data is analyzed while the final chapter contains a description of how the employment data was collected.

The work has three appendices:

Appendix 1: Graphs of Variables for Study Area

Appendix 2: Graphs of Variables by Region

Appendix 3: Inventory of Demographic, Maps, and Formulas

0.3 Section Numbering

Each of these four chapters is divided and then numbered into sections and subsections with digits separated by periods. The numbering system conforms to these designations:

Chapter: the first number
Section: the second number
Subsection: the third number

Thus, 2.3.4 is chapter 2, section 3, and subsection 4 as listed in the Table of Sections (beginning on page 2) as "Exceptions to the Survival and Birth Rates".
A table is numbered by the section in which it occurs. If more than one table is presented then the numbering uses a sequence separate by a dash as in -1, -2, -3 … .

The name and table number of each table is listed in the Index to Tables following the Table of Contents

0.4 Multivolume Work

The 2030 Plan is a large project. This document deals with only demographic projections (how many live and work) in Lafayette.

This volume is part of a comprehensive demographic work of in four parts: text, maps, and tables.

1) This text volume contains primarily discussion and description of the demographic projections, methodology, and survey.

2) A set of 44 maps was produced in two printed formats. The first format is 11 inches by 17 inches while the second format is larger being 24 inches by 36".

3) A set of 5 tables was also printed in a single 11 inch by 17 inch format.

4) A spreadsheet with all of the 100 or so variables listed as columns and each 599 traffic zones listed as a row.

0.5 Official Citations

The official citations of these works for academic and government reporting purposes is:

Lafayette Metropolitan Planning Organization

2005	2030 Transportation Plan: Demographic Method, Projections, and Survey. Lafayette Louisiana: Metropolitan Planning Organization
2005	2030 Transportation Plan: Demographic Maps of the Lafayette Metropolitan Study Area Lafayette Louisiana: Metropolitan Planning Organization
2005	2030 Transportation Plan: Demographic Statistical Tables of the Lafayette Metropolitan Study Area. Lafayette Louisiana: Metropolitan Planning Organization
2005	2030_demo_map _inventory_1-15: Check Sum 2005_05_04 (MS Excel format) Lafayette, Louisiana Lafayette Metropolitan Planning Organization

0.6 Digital Publication

We are seeking to distribute this multivolume work as widely as possible.

We know that the demand for this work will be diverse and not everyone will want a paper copy of each and every text document, table, map, and spread sheet. In order to save distribution and printing cost, we have converted this entire work to digital publications.

All of the digital products cited above are available from the Lafayette in a Century Web site in the demographic section:

http://www.lafayettelinc.net/mpo/demo/intro.asp

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3.0 EMPLOYMENT AND SCHOOL ATTENDANCE METHOD

4.0 EMPLOYMENT SURVEY

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